MATERIA MEDICA AND PHARMACY.

7. *Syrup of Iodide and Chloride of Iron.*—This new preparation of iodine has been proposed by Mr. S. Battley, of London, who gives the subjoined formulæ for its preparation. It possesses more marked chalybeate powers than the iodide of iron. "This," he says, "is readily explained on reference to the constitution of the salt, in which the amount of iron is less than one-fourth of that of the iodine, the combining proportion of the former being twenty-eight, while that of the latter is one hundred and twenty-six. As iodine is incapable of entering into combination with a greater proportion of iron, in order to increase the quantity we may substitute another salt of iron, isomorphous in its crystal, and analogous in constitution in the protochloride. These two salts may be mixed in any proportion without decomposition, and thus present an elegant and powerful preparation of iron, while the iodine, by its action on the glandular system and secretory apparatus, tends to prevent that cerebral plethora which the salts of iron, when given *per se*, so frequently induce.

"The syrup of the iodide and chloride of iron, which it is the object of the preceding remarks to introduce to the notice of the profession, is prepared by first forming a solution of iodide of iron. This is effected by diffusing iodine in three or four times its weight of cold distilled water, and agitating for ten minutes with half the quantity of iron filings, added cautiously and gradually, when the colour changes from dark purple to a deep green, as combination takes place. The protochloride of iron is next formed, by acting upon iron filings with hydrochloric acid, specific gravity, 1.160. A copious disengagement of hydrogen gas ensues, and continues for several hours, during which the chlorine combines with one equivalent of iron, the fluid becomes neutral to test paper, and we obtain a solution of a green colour, also with a shade of blue. The two solutions are now mixed together, and so much refined sugar added as will form a syrup.

"The syrup ought to be of a pale green, representing the protosalts of iron. The proportions of the salts in solutions are so adjusted, that each fluidrachm of the syrup contains three grains of combined iodine and nearly four grains of iron, united partly with the iodine and partly with the chlorine. The following formula may afford an eligible mode of exhibition:—Syrup of iodide and chloride of iron, two drachms; syrup of orange-peel, four drachms; infusion of cascarilla, four ounces. Mix for four draughts, one to be taken twice daily.

"The syrup of iodide of iron, and syrup of chloride of iron, may be made and kept separately, when they can be mixed in any proportion, according to the amount of iron or iodine the practitioner may wish to administer."—*Lancet*, Jan. 9th, 1847.

8. *Bromide of Potassium as a substitute for the Iodide.*—The low price of the bromide compared with that of the iodide of potassium has induced M. Ricord to substitute the former for the latter in the treatment of secondary syphilitic affections. The dose of the bromide is the same as of that of the iodide of potassium. It has produced the same therapeutical effects, but more slowly.—*Journal de Pharmacie*, April 1846.

9. *Santonine.*—This alkaloid, to which attention has been called by Berzelius, has been for some time employed by M. Voillemier as an anthelmintic and with satisfactory results. M. Pinel, a pharmaceutist of Paris, has incorporated it in biscuits, in which form it is most advantageously administered. These biscuits have a pleasant taste, slightly bitter, and from three to four are the dose for an adult and two for children. This dose is sufficient to expel the worms. This medicine does not produce colic or purge, but seems to act as a poison to the worms.

10. *On the changes of composition which the Tincture of Iodine undergoes in keeping.*—M. Guibourt, in a discussion at the French Academy of Medicine, made some remarks on this subject which are of practical value.

"I wish," said the professor, "to direct the attention of the Academy to the variations which the alcoholic tincture of iodine presents in its constitution and

therapeutic effects, according to the length of time which has elapsed since its preparation.

"I will commence by taking a retrospect of the use of iodine since Coindet proposed it as a remedy for goître. The alcoholic tincture was at that time prescribed in doses of four, six, or eight drops two or three times a day, in some aqueous liquid. But the iodine is precipitated on adding the tincture to water, the solid particles of iodine being held in suspension in the liquid; and these being deposited on the coats of the stomach, caused active irritation, and probably small local ulcerations. Thus it was found that persons attacked with goître, but who in other respects were in good health, after commencing the tincture of iodine, experienced pains in the stomach, loss of appetite, bad digestion, and wasting, which gave rise to the opinion, prevalent at that time, that iodine could not be used for reducing goître, without its producing, at the same time, a general emaciation; that it diminished, in particular, the breasts; and that when prescribed for young females it retarded the development of those organs designed for them by nature. Coindet, with the view of obviating these objections to the remedy, substituted for the alcoholic tincture a solution of iodine in iodide of potassium, which, giving no precipitation of iodine when added to water, acted as a mild and uniform stimulant to the stomach, and thus improved the digestive functions. Thus from that time, not only have all the objections which were previously urged against the use of iodine ceased to exist, but, on the other hand, it has been found that weak and debilitated patients improved in appetite and in condition, and young females acquired improved colour, increased development of the breasts, and regularity of the natural economy, in proof of the beneficial action of the medicine. I have taken a review of these circumstances, which must be in the recollection of most medical men, in order to establish the great difference which exists between the action of iodine when administered in the solid state, and in the state of perfect solution. I now pass to the examination of the mixture employed by M. Velpeau in the treatment of hydrocele.

"I will first consider the case of tincture of iodine recently prepared, such as that which I present to the Academy, which was made three days ago, according to the directions of the Codex, by dissolving, without heat, one part of iodine in twelve parts of spirit, sp. gr. .848. If this tincture be mixed with twice its weight of water, the iodine will be almost entirely precipitated in the form of black particles, easily separating by repose, and the supernatant liquid will be almost colourless. In what way should this mixture be taken? If the clear and transparent part only be taken, it would probably produce only a slight stimulating effect, due principally to the spirit. If, on the other hand, the liquid be shaken up before taking it, the solid particles of iodine would be deposited on the coats of the intestinal canal, and would produce a degree of irritation that may not be free from danger.

"I will now consider the case of tincture of iodine which has been prepared four or five months. The following is the change which has taken place during this interval of time. One part of the iodine takes hydrogen from the alcohol to form hydriodic acid, which unites with another portion of iodine to form iodurctted hydriodic acid, which gives no precipitate with water. On the other hand, the alcohol probably replaces the lost hydrogen by iodine, forming another compound not precipitated by water. It is found, therefore, on mixing this tincture, four or five months old, with twice its weight of water, that there is still a precipitation of iodine, but that the precipitate is three or four times less in quantity than that afforded by the recently made tincture. The supernatant liquor, in this case, however, will be much more highly coloured than in the other; and it is unquestionable that the effects of the mixture, whether it be given clear or with the precipitate, would be different from those of a similar mixture made with the recently prepared tincture.

"Lastly, if we take tincture of iodine that has been prepared for a year or a year and a half, it will scarcely cause any precipitation with water, and its medicinal effects will be different from those of the tincture in either of the cases previously considered.

"I conclude from these facts, to which I have long had my attention directed, that the alcoholic tincture of iodine is a medicine liable to variations in its compo-

sition and in its effects. and that it ought to be replaced by a somewhat similar mixture, which should be made extemporaneously. Such, for example, as the following, in which the whole of the iodine would remain in solution, forming a homogeneous mixture:

℞.—Iodine, 5 parts.
Iodide of potassium, 6 parts.
Rectified spirit, 50 parts.
Distilled water, 100 parts.

Triturate the iodine, iodide of potassium, and part of the water in a mortar; then add the spirit, and the remainder of the water."—*Journal de Pharmacie et de Chimie*, Aug. 1846, from *Bulletin de l'Académie de Médecine.*

11. *The action of the Acetate of Morphia on Children.*—Dr. MELION believes, from the results of his experience, that the acetate of morphia possesses more powerful anodyne and antispasmodic properties in children than opium. He divides its effects, when internally administered, into three degrees. 1st. All the secretions and excretions of the internal organs become diminished, but the cutaneous exhalation becomes increased; hence the skin becomes moist, and a copious perspiration covers the head and upper parts of the body; but before this effect takes place it shows its influence on the nervous system, and pain and convulsions cease; its influence lasts from three to six hours, the children then pass a quantity of pale urine, and cutaneous transpiration becomes normal.

2d. The nervous system is the first part affected. The child becomes dull, drowsy, and gradually falls into a state of stupor; it lies with the eyes shut or half open, one more so than the other; the ball of the eye may be either fixed or may roll; the pupil is contracted and inactive; the heat of the head is increased, and the scalp and face are covered with copious perspiration; the child murmurs or speaks during its sleep, and moves its upper lip and lower jaw as in the act of sucking; if it awakens from sleep, it desires to drink, and again falls asleep. This state may last for eight or twelve hours.

In the 3d degree, venous congestion shows itself over the whole body, the child lies listless, the skin is purple, the temperature diminished, the pupils contracted and inactive, the cardiac pulsations weak, the respiration slow, the pulse quick, or slow, small, and weak, and all secretions and excretions suppressed. If this state is not quickly removed, convulsions and death ensue.

Dr. M. employed the acetate with great benefit. 1st. In intestinal catarrh, in the chronic diarrhœa of scrofulous children, and in the profuse debilitating diarrhœa of dentition. 2dly. In convulsions arising from the irritation of dentition or worms. And 3dly. In hooping-cough. As it causes drowsiness and stupor, and other nervous symptoms, even in small doses, he considers it contra-indicated in all cerebral or meningeal affections.—*Monthly Journ. Med. Sci.*, Dec. 1846, from *Med. Wurtemberg Correspondenzblatt.*

MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

12. *On Anormal Nutrition and Diseases of the Blood.*—Dr. J. HUGHES BENNETT, in a very interesting paper, (*Monthly Journ. Med. Sci.*, Nov. 1846,) sustains the very correct general principle that diseases of nutrition and of the blood, are only to be combated by an endeavour to restore the deranged processes to their healthy state, in the order in which they are impaired; that for this purpose, a knowledge of the process of nutrition is a preliminary step to the rational treatment of these affections; that the theory of acting directly on the blood is incorrect; and that an expectant system is as bad as a purely empirical one.

"The various modes," he remarks, "in which nutrition becomes impaired, and the blood diseased, can only be understood by passing in review the various steps of the nutritive process. We have already pointed out how pathology and rational medicine must be based upon anatomy and physiology, and there is no